

4. Schmitz, J. Lebens und Entwicklungsgeschichte einiger Schwämme aus der Klasse der Gastromyceten und Hymenomyceten. *Linnaea* 16: 175. 1842.

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OUR EASTERN SHADWOODS

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The genus *Amelanchier* is interesting to many people, and botanists are but a small part of them. The flowers are early and showy and the fruit is early and quite edible. Throughout most parts of the north temperate zone some form of it occurs, often more than one, and all are much alike. They may be treated as forms of a single species as Michaux, and Torrey and Gray treated our North American forms.

All of the forms of this genus readily and probably naturally fall into two classes. The type of one class is our *A. canadensis* (L.) Medic. This class is characterized by serrate acuminate leaves varying from cordate to cuneate, and naked-topped fruit. It includes *A. asiatica*, *A. oblongifolia* (T. & G.) Roem. and *A. oligocarpa* (Michx.) Roem. The last-named may be made a subclass.

The type of the other class is the European *A. rotundifolia* (Lamarck) Dum.-Cours, synonyms of which are *A. vulgaris*, *A. ovalis* Medic. (1793) and *A. Amelanchier*. This second class is characterized by oblong or rounded leaves, generally dentate and often thick, and woolly-topped fruit. It includes Michaux's *Mespilus canadensis* var. *rotundifolia*, Lamarck's *Crataegus spicata*, Spach's *A. ovalis*, and Nuttall's *A. alnifolia* and the large number of species lately segregated from *A. alnifolia* in the "Far West." All of the characters of these two classes though pretty constant are not always so.

To decide on the names by which the forms shall be called is not a simple matter. They have been described as species and varieties under several generic names, the best known being *Mespilus*, *Crataegus*, *Pyrus*, *Aronia*, and *Amelanchier*, and have often

been transferred from one genus to another. At least forty different specific and varietal names had been applied to them before 1850. With four sets of rules, Vienna, Kew, Rochester, and Philadelphia, and at least as many different interpretations of them, uniformity of names can hardly be expected at present for such varying and poorly studied plants.

There is no complete index to the literature on this genus. Many names are omitted in the Index Kewensis, and even when Watson's Bibliographical Index, Roemer's Synopses Monographicae and Sargent's Silva are also consulted, important references are wanting.

A. CANADENSIS (L.) Medic. There seems to be good reason to adopt this name for our largest form. Linnaeus named it *Mespilus canadensis*, or rather adopted the name. Medicus put it into his genus *Amelanchier* in 1793. But it has another name. When the son of Linnaeus transferred his father's *Mespilus canadensis* to the genus *Pyrus*, for some reason not apparent he gave it a new specific name, *Botryapium*, which De Candolle retained when he transferred it to *Amelanchier*, in 1825, so that *A. Botryapium* is a synonym for this species and is generally used in English nurseries. Torrey and Gray very ingeniously united both names, calling it *A. canadensis* var. *Botryapium*. Some of its other synonyms are quite suggestive of its appearance, such as *arborea*, *raccmosa*, and *cordata*. Michaux's specimen of the latter, *M. canadensis* var. *cordata*, as he called it, is very typical; a photograph of it is now in the Gray Herbarium.

A. INTERMEDIA Spach. The smaller forms of *A. canadensis*, generally called "oblongifolia," become under the Rochester Code *A. obovalis* (Michx.) Ashe. The photograph in the Gray Herbarium of Michaux's specimen seems to be typical. If we regard this form or rather these forms as a variety, the name will be *A. canadensis* var. *obovalis*. But if we regard it as a species there seems to be no excuse under the other three rules for disregarding the oldest available specific name which it has received. Spach named it as above in 1834, or four years before Torrey and Gray used the varietal name *oblongifolia*, which Roemer made specific in 1847. Spach gave it a good character-

ization and placed it in his book and described it as intermediate between *A. canadensis* and a species of American *Amelanchier* which he called "*A. ovalis* (*Crataegus spicata* Lam.)."

A dwarf form of this class grows on the rocks at Bellows Falls, Vt., between the two railroad bridges. It is so interesting that it is proposed here as a new species :

Amelanchier saxatilis sp. nov. Small, spreading, partly prostrate shrubs, 1 to 3 feet high, irregularly and abundantly branched; branches slender, twigs very slender; breaking buds slim, rather woolly, scales narrow; bracts rose-color. Leaves very woolly on the lower side when young, glabrous when full-grown, oval, rounded at the base, points short and broad, finely serrate, 1.5 in. long by 1 in. wide. Flowers early, abundant, rather small, well proportioned, 0.75 in. broad, very white, in very numerous, spreading, slender racemes; peduncle, pedicels, and calyx densely woolly. Petals very narrow, three times as long as wide. Fruit small, ripening early, in slender racemes, top of pome glabrous.

Type in the herbarium of W. H. Blanchard. This form has much of the habit of the sand cherry, *Prunus pumila* L. and when in flower would be taken for it at a little distance. This delicate species is not the dwarf form of *A. intermedia* Spach, which grows on the rocks near the coast, often hardly a foot high, erect and bearing fruit.

A. OLIGOCARPA (Michx.) Roem. The mountain form with few flowers has generally had but one name, though sometimes it has been called *A. sanguinea*, which name belongs to another species. It is quite variable and has been little studied. Dr. Britton has recently segregated from it

A. ARGUTA Nutt., which is perhaps more correctly *A. arguta* Britton, the name, it appears, having been given first to an herbarium specimen by Nuttall but first published in Britton's Manual, ed. 2, p. 1066, without citation of a type or any definite reference to the source of the name. The species, however is more fully described in TORREYA 5: 107. Je 1905, by Mr. Eggleston, who indicates the materials from which the original description was drawn.

The forms of the second class which have been called *sanguinea*,

spicata, *ovalis*, and *rotundifolia* may now be considered. The last two names are not available, as they were early used for the European species. There appear to be two forms of this second class in eastern North America. The first is a northern form mostly confined to Canada and the high or northern sections of the United States. It has large and nearly round leaves, generally coarsely toothed, often approaching *A. alnifolia* in that respect, has white flowers, and is often quite large or a small tree. The second form is more southern, more dwarf, with oval leaves, late, often yellow, flowers, and late-ripening fruit.

The first form seems to be the one named *Crataegus spicata* by Lamarck, which he says is supposed to have been brought from Canada. He saw the plant in cultivation. The combination *Amelanchier spicata* was first made by Koch in 1869, but he described *A. intermedia* (*A. oblongifolia*). However, as he expressly and conspicuously cites Lamarck's *Crataegus spicata*, his name must be considered as applying also to Lamarck's plant and indeed the latter may be fairly interpreted as the type of the binomial *Amelanchier spicata*. In 1874 Decaisne made the combination again and he also described *A. intermedia*. Again in 1893 Koehne made the combination in his Dendrology, but he has not described Lamarck's plant. The name is still available and cannot be dropped, so it is taken up again :

A. SPICATA (Lamarck) Koch, Dendrologie 1:182. 1869.
(Excluding description.)

Described by Lamarck, Encyclo. 1: 84. 1784. He says it is two or three times as high as the European species, leaves rounded, dentate, nearly as wide as long, 1.5 inches in diameter. Michaux in his Flora of North America 1:291. 1803, described it under the name of *Mespilus canadensis* var. *rotundifolia*: "Arboresens; foliis suborbiculato-ovalibus, utrinque rotundatis." Habitat, "in Canada." Tracings in the Gray Herbarium of two leaves of Michaux's specimen are evidently quite different from the specimens Koehne has sent out to illustrate his book. Another name which seems to have been given to this form is *A. sanguinea* (Pursh) De Candolle, 1825, and under any rules which would preclude the use of a combination a second time

and would, in a case like *A. spicata* (Lamarck) Koch, restrict a new binomial to a plant to which an older specific name has been mistakenly transferred, *A. sanguinea* would have precedence over all others.

The second form has been known as *A. ovalis* and *A. spicata*, the former an unavailable name, and is abundant in many parts of New England and probably extends much farther west. It may be described as

Amelanchier erecta sp. nov. A slender erect shrub, 4 to 12 feet high, sparingly branched, growing in colonies and making a thick hedge. Twigs very erect, stocky. Buds very woolly when breaking, bud-scales short; bracts dark-purple, the starting leaves often yellow. Leaves very woolly on the under side when young, glabrous when fully grown, broad-oval, rounded or slightly cordate at the base, point short and broad or wanting, rather coarsely serrate-dentate or often even finely serrate; the leaves on vigorous new wood larger, often very broad, sometimes nearly orbicular. Flowers not large, often having a spread of less than an inch, often light-yellow, in close, stocky racemes, densely woolly. Fruit on erect pedicels in close erect clusters, the calyx-lobes rather short, reflexed-curved, rather small, the top of the pome densely woolly within the calyx lobes. Starts some days later than *A. canadensis* and ripens its fruit several weeks later.

Type in herbarium of W. H. Blanchard.

The fruit seems to drop badly when nearly ripe, and with the depredations of birds ripe fruit is often scarce. Abundant and typical in and around Bellows Falls, Vt., both on rocks and in dry or loamy soil.

The evidence seems to be pretty conclusive that Lamarck's *spicata* is the northern form of Michaux — his *rotundifolia*. Lamarck's description agrees well with Michaux's. He says that the plant he described grew in the Royal Garden and in private grounds and was supposed to be a native of Canada. The close connection of Canada to France until 1763 makes it almost certain that Canada was its home. There is no reason to suppose it came from a more southern region. Koehne evidently tried to include in his *spicata* both the northern and more southern forms, but his description and his specimens apply to the more southern form.

Diverging and intergrading forms are abundant in the genus. Noticeably so is it with the arboreal species, *A. canadensis*. Trees occur whose leaves are pubescent throughout the season. Leafy forms occur whose fruit branches are remarkably leafy, the fruit being entirely hidden. Birds make such onslaughts on the ripe fruit that in order to get it in quantity and perfection it is necessary to study it miles away from the inhabited sections, for birds are rare in such localities.

WESTMINSTER, VT.

SHORTER NOTES

Ribes chihuahuense sp. nov. — Branches smooth, gray. Leaves ovate to suborbicular in outline, the blades 2–2.5 cm. long, dull dark-green above, pale-green beneath, broadly cuneate to subtruncate at the base, 3-lobed, glabrous on both sides, papillose above when young, sparingly ciliate on the margin, the lobes few-toothed, acutish or obtuse, petioles as long as the blades or shorter, pubescent when young; racemes 3–5-flowered, a little longer than the leaves, the axis densely pubescent; flowers sessile or very nearly so, bracts ovate-elliptic, obtuse, ciliate, 5–7 mm. long; hypanthium nearly cylindrical, 1 cm. long, sepals oblong, obtuse, 6–7 mm. long; petals ovate-oblong, acute, a little more than half as long as the sepals.

Chihuahua, Mexico, Feb., 1903, *C. A. Purpus*, 1061. Differs from all the United States species by the essentially sessile flowers.

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FASCIATIONS IN *DROSERA*, *IBERVILLEA*, AND *CECROPIA*. — The fasciated specimen of *Drosera rotundifolia* pictured herewith was found in the propagating houses of the New York Botanical Garden in March, 1907. The flattening affected the stem, resulting in a fasciated rosette, with a growing line 1.4 cm. in length. The literature of teratology seems to contain no instance of fasciation in this genus, while the odd character of the plants makes the appearance of anomalous individuals the object of peculiar interest.

Another fasciation of a curious and rare species is that of a shoot of *Ibervillea Sonorae*. One of the vine-like branches which